

EXHIBIT A

IN THE
UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

DONALD AGEE, JR., et al.,

Plaintiffs,

v.

JOCELYN BENSON, in her official
capacity as the Secretary of State of
Michigan, et al.,

Defendants.

No. 1:22-cv-272

ANALYSIS OF PROPOSED MICHIGAN SENATE MAPS

Sean P. Trende, Ph.D.

July 1, 2024

Contents

1	Qualifications and Scope of Report	1
2	Evaluation of Proposed Map	1
2.1	The Proposed Map eliminates the “spoke concept” and eliminates unnecessary county splits.	1
2.2	The Changed District in the Proposed Map are more compact than those in the Linden Plan.	4
2.3	The Proposed Districts do not appear to be racial gerrymanders.	4
2.4	The Newly Proposed Districts enhance minority voting opportunity. . . .	7
2.5	The Newly Proposed Districts do not upset the political balance of the previous map.	7
3	Conclusion	8

1 Qualifications and Scope of Report

My qualifications are set forth fully in my Expert Report of Sean P. Trende, dated January 18, 2023 (“Trende Trial Report”) in this matter and have not changed significantly since then. The only substantive changes to my qualifications are that I have testified or been deposed in additional cases, and that I was formally awarded my Ph.D in December.

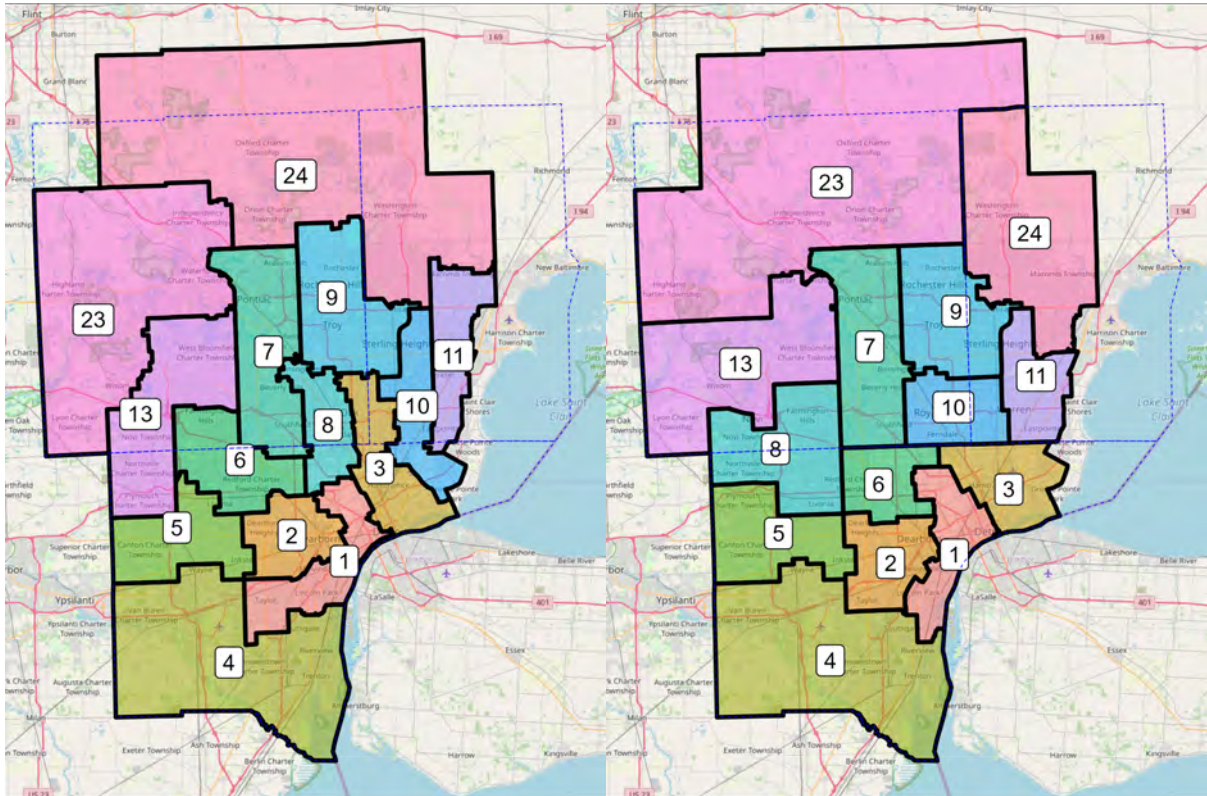
I have been asked to evaluate the Michigan Independent Citizen’s Redistricting Commission’s (“MICRC”) Final Remedial State Senate Plan, as made available at <https://www.michigan.gov/micrc/mapping-process-2024/final-remedial-state-senate-plan> (hereinafter “Proposed Map” or “Proposed Districts”) to see if it eliminates the racial gerrymandering that this Court found was present in the Linden Map. Because the Proposed Map only changes districts 1-11, 13, 23, and 24 (collectively, “Changed Districts”), I will restrict my analysis to those districts.

2 Evaluation of Proposed Map

2.1 The Proposed Map eliminates the “spoke concept” and eliminates unnecessary county splits.

The two maps below compare the Changed Districts as they appear in the Linden Map and in the Proposed Map.

Figure 1: Illustration of Reock Scores



(a) Linden Map (Changed Districts Only) (b) Proposed Map (Changed Districts Only)

It is obvious that the constitutionally offensive “spoke concept” that animated the Linden map has been abandoned. The core retention of the Changed Districts is fairly low. More importantly, the maps now contain six districts wholly within Wayne County, whereas the previous maps only contained four. Only District 8 traverses the Wayne/Oakland boundary, and does so far away from the Black population of Wayne County, while only District 12 traverses the Wayne/Macomb boundary. The number of Oakland-Macomb traversals has been decreased from three to two.

Moreover, the cores of the unconstitutional districts have been unwound. The following table shows the largest fragment of the population that was kept together in a single district among the Changed Districts from Linden to the Proposed Map.

Figure 2: Core Retention in Changed Districts

Linden	Core
9	96.15%
4	90.50%
7	90.31%
5	89.11%
2	74.11%
1	58.91%
8	55.82%
10	55.19%
23	53.85%
6	52.68%
11	51.02%
24	49.41%
3	49.08%
13	43.95%

The unconstitutionally racially gerrymandered districts of the Linden Map in particular have core retention rates in the 50%-60% range. While there is no hard cutoff for the percentage of cores retained that is acceptable, for these purposes keeping barely more than half of the population in a successor district is a good indicator that the districts have been substantially changed, especially when read in conjunction with the other factors in this report.

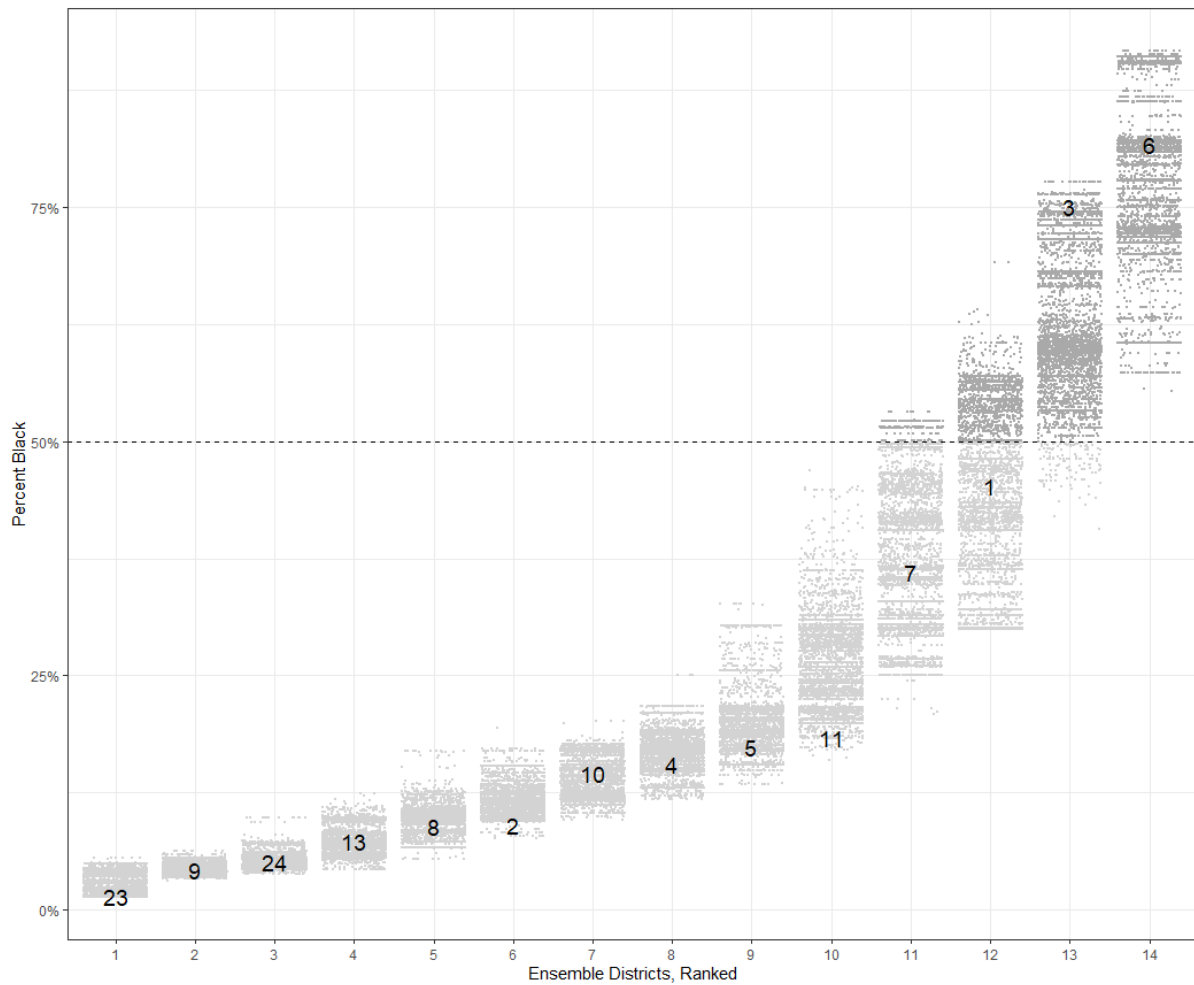
2.2 The Changed District in the Proposed Map are more compact than those in the Linden Plan.

Likewise, the compactness metrics for the Changed Districts in the Proposed Map are substantially stronger than for the same districts under the Linden Map. Of the Changed Districts under the Linden Map, the average Reock score is 0.386. Of the Changed Districts under the Proposed Districts, the average Reock score is 0.454. The mean Polsby-Popper scores are 0.349 and 0.473, respectively. If we look at the least compact district in each map using Reock scores, for Linden it was 0.27 and under the new map it is 0.347. Using the Polsby-Popper scores, for Linden it was 0.202 and for the Proposed Districts it is 0.31. Whether a change in compactness is substantial or not is something that is in the eye of the beholder, but these are meaningful differences.

2.3 The Proposed Districts do not appear to be racial gerrymanders.

I have re-run my simulations, keeping intact the jurisdictions that the Proposed Districts keep intact, limiting the number of county traversals, and examining only the precincts contained in the Changed Districts. The Changed Districts are all within the realistic range of maps drawn without respect to racial data. District 11 is less heavily Black than we might expect, and District 3 is more so. However, unlike the Linden Plan, the changes do not occur in areas where it would make a difference in the overall racial

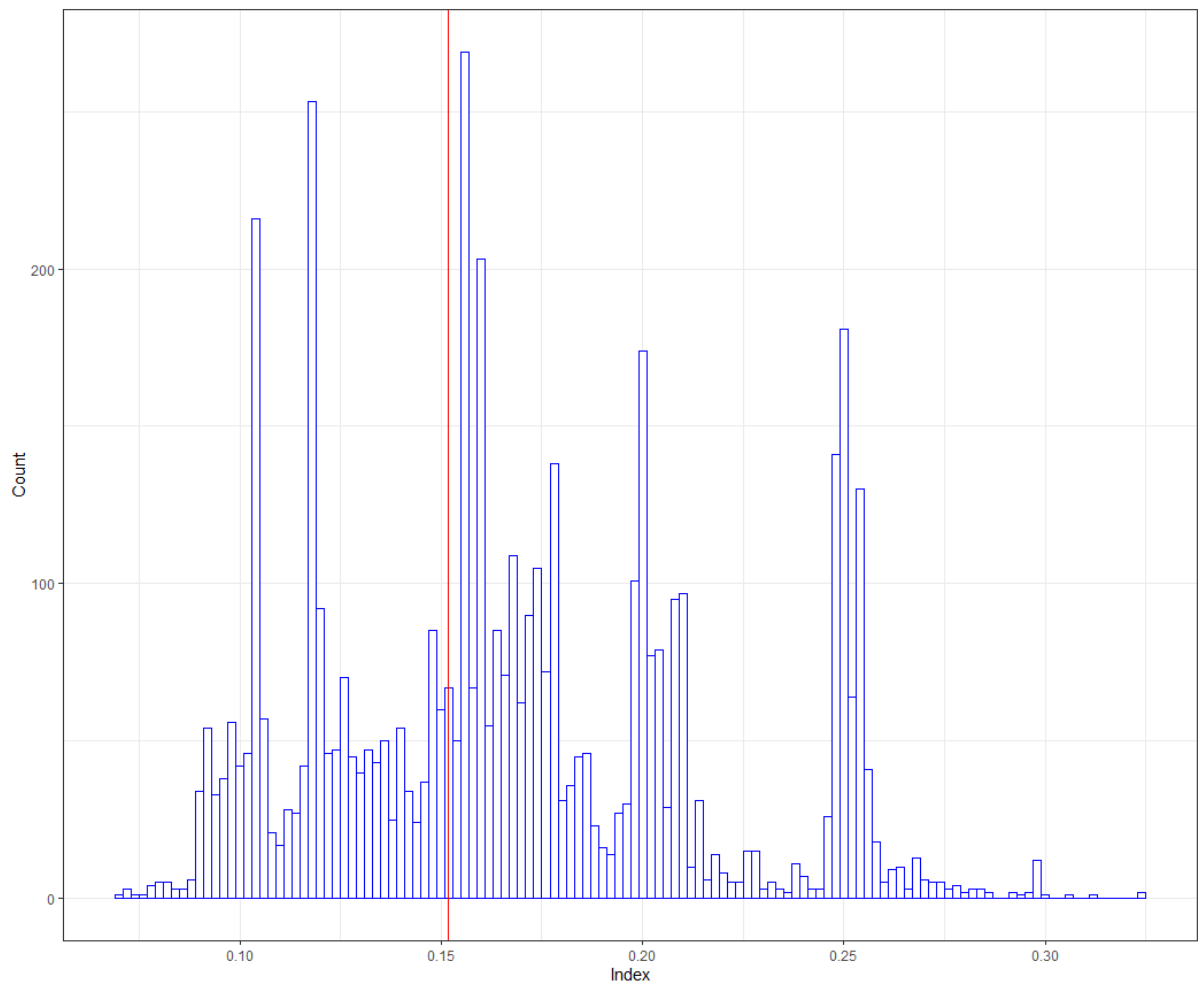
Figure 3: Racial Dotplots for simulations, Changed Districts in Proposed Map



balance of the map; District 11 would be perhaps 25% BVAP and District 3 would be perhaps 62%-63% BVAP if they were drawn completely race-free. Regardless, race does not seem to have predominated in the drawing of these maps.

Unsurprisingly then, the gerrymandering index for this plan falls squarely within the range of gerrymandering indices for the ensembles.

Figure 4: Gerrymandering Index for simulations, Changed Districts in Proposed Map



2.4 The Newly Proposed Districts enhance minority voting opportunity.

Although the Court did not rule on Plaintiffs' Voting Rights Act claims, I note that the Proposed Map improves opportunity to elect candidates of choice. The Linden Map contained no districts with BVAPs that exceeded 45%. The current map offers three districts that do so, including two (3 and 6) that offer Black voters a clear opportunity to elect their candidates of choice. While the simulations suggest that it is still easy to draw four majority Black state Senate districts, this map represents a clear improvement over the status quo.

2.5 The Newly Proposed Districts do not upset the political balance of the previous map.

Nor do the new Proposed Districts appear to have upset the political balance of the previous map. Using the five-election metric utilized by the MICRC originally, the efficiency gap was -0.347. Under the new proposed Districts it is -0.0341. Using the 2020 presidential election, the efficiency gap was 0.006, it is the same under the Proposed Districts. The previous map had 21 districts carried by President Joe Biden, while the Proposed Districts have the same. Using the five-election metric utilized by the MICRC in its initial work, there are 20 Democratic districts under each map.

3 Conclusion

The Proposed Districts appear to eliminate the predominate use of race that characterized the previous plans. While more could be done to enhance the ability of Black residents to elect their candidates of choice, they reflect an improvement over the status quo.

I declare under penalty of perjury under the laws of the State of Ohio that the foregoing is true and correct to the best of my knowledge and belief. Executed on 1 July, 2024 in Delaware, Ohio.

Sean Trende

Sean P. Trende